ACIP Votes to Recommend Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccine for Adults

(Advisory Committee on Immunization Practices)

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Pertussis is a highly contagious respiratory tract infection. Although most children are protected against pertussis by vaccination during childhood, immunity wanes over time and leaves adolescents and adults unprotected. In 2004, U.S. adults 19–64 years of age accounted for 7,008 of 25,827 (27%) reported pertussis cases. The true number of cases among adults 19-64 years of age is likely much higher, estimated at 600,000 annually. The clinical presentation of pertussis in adults ranges from mild cough illness to classic pertussis (i.e., prolonged cough characterized by paroxysms, post-tussive vomiting, and inspiratory whoop). Complications include rib fractures resulting from severe cough and pneumonia requiring hospitalization. Adults with pertussis can transmit the infection to other people, including infants. Infants are at highest risk of pertussis-related complications and death compared with older age groups.

A Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (Tdap) product, ADACEL™ (sanofi pasteur), was licensed by the FDA on June 10, 2005 as a single dose booster vaccine for persons 11-64 years of age to provide protection against tetanus, diphtheria, and pertussis (www.fda.gov/cber/label/tdapave061005LB.pdf). Another Tdap vaccine, BOOSTRIX® (GlaxoSmithKline Biologicals), was licensed by the FDA on May 3, 2005 for persons 10-18 years of age.

On October 26, 2005, the Advisory Committee on Immunization Practices (ACIP) recommended routine use of a single dose of Tdap for adults 19-64 years of age to replace the next booster dose of tetanus and diphtheria toxoids vaccine (Td). The ACIP also recommended Tdap for adults who have close contact with infants <12 months of age. On February 22, ACIP recommended Tdap for health-care personnel as soon as feasible. Provisional ACIP recommendations are summarized below. These recommendations are under review by the Director of the CDC and the Department of HHS, and will become official when published in CDC's *Morbidity and Mortality Weekly Report* (MMWR) (www/cdc.gov/mmwr/). ACIP recommendations for Tdap (ADACEL™ and BOOSTRIX®) among adolescents 11-18 years of age are available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr55e223a1.htm.

Provisional Recommendations for Tdap in Adults

The following provisional recommendations for a single dose of Tdap (ADACEL™) apply to adults 19-64 years of age who have not received Tdap previously.

- **Routine:** Adults should receive a single dose of Tdap to replace a single dose of Td for booster immunization against tetanus, diphtheria, and pertussis if they received the last dose of tetanus toxoid-containing vaccine (e.g., Td) ≥10 years earlier.
- **Shorter interval between Td and Tdap:** Tdap may be given at an interval shorter than 10 years since receipt of the last dose of tetanus toxoid-containing vaccine to protect against pertussis. The safety of an interval as short as approximately 2 years between administration of Td and Tdap is supported by a Canadian study of children and adolescents. The dose of Tdap replaces the next scheduled booster dose of Td.

- **Prevention of pertussis among infants <12 months of age by vaccinating adult contacts:** Adults who have or who anticipate having close contact with an infant <12 months of age (e.g., parents, grandparents <65 years of age, childcare providers, health-care workers) should receive a single dose of Tdap. An interval of 2 years or more since the last dose of tetanus toxoid-containing vaccine is suggested; a shorter interval can be used. Ideally, Tdap should be given at least one month before beginning close contact with the infant. Women should receive a dose of Tdap in the immediate post-partum period if they previously have not received Tdap. Any woman who might become pregnant is encouraged to receive a single dose of Tdap.
- **Health-care personnel:** Health-care personnel who work in hospitals or ambulatory care settings and have direct patient contact should receive a single dose of Tdap as soon as feasible if they have not previously received Tdap. Priority should be given to vaccination of health-care personnel with direct contact with infants aged <12 months. An interval as short as 2 years from the last dose of Td is recommended for the Tdap dose. Other health-care personnel (i.e., those who do not work in hospitals or ambulatory care settings or who do not have direct patient contact) should receive a single dose of Tdap according to the routine recommendation and interval guidance for use of Tdap among adults. However, these personnel are encouraged to receive the Tdap dose at an interval as short as 2 years following the last Td. Hospitals and ambulatory care facilities should provide Tdap for health-care personnel and use approaches that maximize vaccination rates such as education about the benefits of vaccination, convenient access, and provision of Tdap at no charge.
- **Simultaneous administration:** Tdap should be administered with other vaccines that are indicated during the same visit when feasible. Each vaccine should be administered using a separate syringe at a different anatomic site.

Special Situations

- **Tetanus prophylaxis in wound management:** Adults 19-64 years of age who require a tetanus toxoid-containing vaccine as part of wound management should receive Tdap instead of Td if they previously have not received Tdap. If Tdap is not available or was administered previously, Td should be administered.
- **Incomplete or unknown vaccination history:** Adults who have never received tetanus and diphtheria toxoid-containing vaccine should receive a series of three vaccinations. The preferred schedule is a dose of Tdap, followed by a dose of Td $\geq$4 weeks later, and a second dose of Td 6 to 12 months later. Tdap can substitute for Td for any one of the three doses in the series.
- **History of pertussis:** Adults with a history of pertussis generally should receive Tdap according to routine recommendations.
- **Pregnancy:** Pregnancy is not a contraindication to Tdap or Td vaccination. Guidance on the use of Tdap during pregnancy is under consideration by ACIP. At this time, pregnant women who received the last tetanus toxoid-containing vaccine <10 years earlier should receive Tdap after delivery, according to routine recommendations for vaccinating adult contacts of infants <12 months of age. Women who received the last tetanus toxoid-containing vaccine $\geq$10 years earlier should receive Td during pregnancy in preference to Tdap, and pregnant women who have not received the primary 3-dose vaccination series for tetanus should begin the Td series during pregnancy. If Td is indicated during pregnancy, vaccinating during the second or third trimester is preferred when feasible.
- **Adults $\geq$65 years of age:** Tdap is not licensed for use among adults $\geq$65 years of age. Recommendations for use of Tdap among adults $\geq$65 years of age will be updated as new data become available. All adults, including adults $\geq$65 years of age, should receive a

dose of tetanus toxoid- and diphtheria toxoid-containing vaccine every 10 years and as indicated for wound management.

Contraindications to Tdap

- History of serious allergic reaction (i.e., anaphylaxis) to vaccine components
- History of encephalopathy (e.g., coma, prolonged seizures) not attributable to an identifiable cause within 7 days following administration of a pertussis vaccine.

Precautions and reasons to defer Tdap:

- Guillain-Barré Syndrome (GBS) ≤6 weeks after a previous dose of a tetanus toxoid-containing vaccine
- Moderate to severe acute illness
- Unstable neurological condition
- History of Arthus hypersensitivity reaction to a tetanus toxoid-containing vaccine administered < 10 years previously.

Reporting Adverse Events after Vaccination:

All clinically significant adverse events following vaccination should be reported to VAERS, even if a causal relationship to vaccination is uncertain. VAERS reporting forms and information are available electronically at http://www.vaers.hhs.gov/ or by calling (800) 822-7967. Providers are encouraged to report electronically at https://secure.vaers.org/VaersDataEntryintro.htm.